

**WE CLAIM:**

1           1.       An apparatus for monitoring one or more supported systems using a wireless  
2       device with respect to which the wireless device is in an idle mode while the wireless device  
3       is in a connected mode with respect to another supported system, the apparatus comprising:  
4                    an air interface;  
5                    at least two access means associated with said at least two supported  
6       telecommunications systems for providing said wireless device with access to said at least  
7       two supported systems; and  
8                    a circuit, said circuit including a connection to said air interface, and a  
9       plurality of connections to said at least two access means, said circuit providing a low  
10      attenuation between the air interface connection and a connection of said plurality of  
11      connections to the access means associated with a supported system with respect to which the  
12      wireless device is in a connected mode, said circuit further including means for setting the  
13      circuit to at least two states, wherein each of the at least two states provides a different  
14      attenuation between the air interface connection and one of said plurality of connections to  
15      said at least two access means.

1           2.       The apparatus according to Claim 1, wherein said circuit further attenuates a  
2       transmit signal present on the connection to the access means associated with the system that  
3       is in a connected state and the air interface to a receiver of a system of said at least two  
4       systems that is in an idle state, wherein said system of said at least two systems that is in an  
5       idle state monitors the air interface.

1           3.       The apparatus according to Claim 1, wherein said circuit further provides a  
2   low attenuation between the air interface connection and a connection to a receiver of a  
3   system of said at least two systems that is in an idle state.

1           4.       The apparatus according to Claim 1, wherein said at least two systems  
2   includes a GSM system.

1           5.       The apparatus according to Claim 1, wherein said at least two systems  
2   includes a WCDMA system.

1           6.       The apparatus according to Claim 1, wherein said circuit further includes a  
2   diplexer, and wherein said setting means comprises a switch.

1           7.       The apparatus according to Claim 1, wherein said at least two systems  
2   comprise a GSM system and a WCDMA system, and wherein said setting means sets said  
3   circuit to a first state in which the circuit provides a low attenuation between the air interface  
4   connection and a connection to a receiver/transmitter of said WCDMA system, and a low  
5   attenuation between the air interface connection and a connection to a receiver of said GSM  
6   system, and a second state in which said circuit has a low attenuation between the air  
7   interface connection and a connection to a transmitter of said GSM system.

1           8.       The apparatus according to Claim 7, wherein when said circuit is in said first  
2   state, said circuit attenuates a transmit signal from said WCDMA system going to said  
3   receiver connection of said GSM system so that said receiver of said GSM system is not

4 blocked, and wherein when said circuit is in said second state, said circuit attenuates a  
5 transmit signal from said GSM system going to the WCDMA receiver/transmitter connection  
6 so that the receiver of said WCDMA system is not blocked.

1 9. The apparatus according to Claim 7, wherein said receiver of said WCDMA  
2 system includes automatic gain control (AGC), and wherein said circuit further includes  
3 means for changing a characteristic of said WCDMA receiver when said GSM system is in a  
4 connected state.

1 10. The apparatus according to Claim 1, wherein the system that is in a connected  
2 state controls said circuit.

1 11. A wireless device, comprising:  
2 an air interface;  
3 a receiver and a transmitter associated with a GSM telecommunications  
4 system;  
5 a receiver/transmitter associated with a WCDMA telecommunications system;  
6 and  
7 a circuit including a connection to said air interface, a connection to said  
8 receiver/transmitter associated with said WCDMA system, a connection to said receiver  
9 associated with said GSM system and a connection to said transmitter associated with said  
10 GSM system, said circuit further including setting means for setting said circuit to first and  
11 second states, in said first state, said circuit having a low attenuation between the air interface  
12 connection and the connection to the receiver/transmitter associated with said WCDMA

13 system, and a low attenuation between the air interface connection and the connection to the  
14 receiver associated with said GSM system, and in said second state, said circuit having a low  
15 attenuation between the air interface connection and the connection to the transmitter  
16 associated with the GSM system.

1 12. The wireless device according to Claim 11, wherein in said first state, said  
2 circuit attenuates a transmit signal from said WCDMA system going to said connection to  
3 said receiver associated with said GSM system so that said GSM receiver is not blocked, and  
4 wherein in said second state, said circuit attenuates a transmit signal from said GSM system  
5 going to the connection to the receiver/transmitter associated with the WCDMA system so  
6 that the receiver associated with the WCDMA system is not blocked.

1 13. The wireless device according to Claim 11, wherein the receiver associated  
2 with the WCDMA system includes automatic gain control (AGC), and wherein said circuit  
3 further includes means for changing a characteristic of said receiver when the GSM system is  
4 in a connected state.

1 14. The wireless device according to Claim 11, wherein said setting means  
2 comprises a switch, and wherein said circuit further includes a diplexer.

1 15. The wireless device according to Claim 14, wherein said diplexer is connected  
2 to said air interface connection, to said receiver/transmitter associated with said WCDMA  
3 system, and to said switch, and wherein said switch is connected to said receiver associated  
4 with said GSM system in said first state and to said transmitter associated with said GSM  
5 system in said second state.

1           16.     The wireless device according to Claim 11, wherein said wireless device  
2 comprises a cellular phone.

1           17.     A method for monitoring a telecommunications system with respect to which  
2 a wireless device is in an idle mode while the wireless device is in a connected mode with  
3 respect to another telecommunications system comprising:

4                   providing a circuit having an air interface connection, and a plurality of  
5 connections to at least two access means associated with at least two telecommunications  
6 systems supported by the wireless device; and

7                   setting the circuit to one of at least two states, wherein each state provides a  
8 different attenuation between the air interface connection and one of the plurality of  
9 connections.

1           18.     The method according to Claim 17, wherein said circuit provides a low  
2 attenuation between the air interface connection and a connection to the access means  
3 associated with a system of said at least two systems with respect to which the wireless  
4 device is in a connected state.

1           19.     The method according to Claim 18, wherein said circuit provides a low  
2 attenuation between the air interface connection and a connection to a receiver of a system of  
3 said at least two systems with respect to which said wireless device is in an idle mode.

1           20.     The method according to Claim 18, wherein said circuit attenuates a transmit  
2 signal from said system in a connected mode to a receiver of a system of said at least two  
3 systems with respect to which said wireless device is in an idle mode.

1           21.     The method according to Claim 17, wherein said at least two systems  
2 comprises a WCDMA system and a GSM system.

1           22.     The method according to Claim 21, wherein a receiver associated with said  
2 WCDMA system includes automatic gain control (AGC), and wherein the method further  
3 includes changing a characteristic of said receiver when the wireless device is in a connected  
4 state with respect to the GSM system.

1           23.     The method according to Claim 17, further comprising the step of monitoring  
2 at least a first one of said at least two telecommunications systems while communicating via  
3 a second one of said at least two telecommunications systems.

1           24.     The method according to Claim 21, further comprising the step of controlling  
2 the circuit by a system which is in a connected state.